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FACTORS AFFECTING THE SELF-ESTEEM HYPOTHESIS: SELF-SERVING BIASES IN THE INTERGROUP SITUATION

by

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APPROVAL PAGE

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The purpose of this research was to assess whether an individual's engagement of self-serving strategies was dependent upon (a) one's level of self-esteem, (b) the stability of one's self-esteem, and (c) the relevance or importance of the evaluative feedback. The research was tested using an intergroup paradigm, as supporting evidence within this paradigm had demonstrated that only high self-esteem individuals were capable of engaging in self-enhancing strategies or intergroup bias when their self view was threatened with negative evaluative feedback. One-hundred and eighty female college students comprised the sample.

The 2 x 2 x 2 x 2 analysis of variance provided converging evidence that both high and low self-esteem individuals are capable of engaging in self-serving strategies but it depends on a combination of factors. When performance feedback is negative and related to one's intelligence and creative ability, low self-esteem individuals do not demonstrate the same engagement of self-serving strategies as demonstrated by high self-esteem individuals. When negative performance feedback does not implicate one's intellectual or creative ability, low self esteem individuals are capable of engaging in self-serving strategies. The ability to engage in self-serving strategies was further related to the stability of self-esteem with unstable high self-esteem being the most reactive to evaluative feedback that implicates their intellectual and creative ability. These results were demonstrated most effectively when direct measures were used to assess self-serving biases within individuals.

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CHAPTER 1

INTRODUCTION

Although there is no one agreed upon definition of the self, most agree that there are two components of the self: self knowledge and self evaluation. Self knowledge consists of the beliefs held about oneself, or one's 'self view'. Self-esteem is an evaluative term used to reflect the individual's feelings or generalized expectancy about one's self worth (Shrauger, 1975). Considered to be relatively stable, these feelings can fluctuate around a baseline level.

Research on self-esteem tends to focus on the stable characteristic differences between individuals with favorable evaluations of the self (high self-esteem) versus unfavorable evaluations (low self-esteem). Because protecting and maintaining self-esteem is considered by many theorists to be the fundamental guide of social behavior (Baumeister, Heatherton & Tice, 1993), a great deal of research also focuses on the need for self-esteem as a motivator of and explanation for behavior, the 'self-esteem hypothesis' (Hogg & Abrams, 1988). Thus, differences between high and low self-esteem include not only characteristic differences regarding individuals' self views but also differences in individual actions to maintain those beliefs.

High self-esteem is generally believed to be a desirable, adaptive state related to healthy behavior, good adjustment, and self-acceptance. These individuals are less influenced by external sources of self-relevant information (Frey & Carlock, 1989).

Because more positive aspects of their self image are accessible, they are less reactive to negative self information. High self-esteem, and positive changes in self-esteem, increase positive emotions as well as security (Epstein, 1976); and people with high self-esteem are usually more apt at displaying self-enhancement behavior (Swann, 1983; Swann, Griffin, Predmore, & Gaines, 1987). High self-esteem individuals are considered to be 'masters of their environment' as they have greater expectations to succeed (Baumeister, Heatherton & Tice, 1993).

Low self-esteem, on the other hand, is generally considered maladaptive, as it has been found to be associated with higher levels of anxiety (Greenberg et al., 1992), unhappiness (Epstein, 1976), and depression (Tennen & Herzberger, 1987; Becker, 1979). Individuals with low self-esteem are generally believed to experience self-rejection, self-dissatisfaction, self-contempt, and self-disparagement (Rosenberg, 1965; Frey & Carlock, 1989). Poorly developed self-schemas result in low self-esteem individuals having fewer and less distinct positive aspects of their self feelings (Baumgardner, 1990; Campbell, 1990). Because of this, individuals with low self-esteem are more susceptible to external information and have more intense, negative reactions towards negative feedback (Kernis, 1993; Moreland & Sweeney, 1984). Rather than focusing on engaging in behaviors that would increase the positivity of their self-esteem, low self-esteem individuals seem to engage in self-protective behaviors that will reduce the negative affect associated with their low self view. When faced with negative self-relevant information, they are more likely to engage in downward comparison, and use stereotypes or display prejudices (Campbell & Lavallee, 1993). Unlike high self-esteem individuals, it has also been demonstrated that low self-esteem individuals fail to show self-enhancement or self-

serving biases (see Taylor & Brown 1988, for a review; Crocker et al., 1987; Crocker & Luhtanen, 1990; Seta & Seta, 1992; Seta & Seta, in press; Swann et al., 1987).

The distinction between high and low self-esteem, however, is not so clearly defined as one might infer from the aforementioned discussion. Within these distinctions of high and low self-esteem is the position that low self-esteem is inherently unstable due to the susceptibility towards external self-relevant cues. However, instability is not strictly associated with low self-esteem. Rosenberg (1965, 1979) stated that stability reflects psychological processes which are distinct from level of self-esteem. Individuals not only have global self evaluations, but these evaluations may show short term fluctuations or instability. Research, in fact, indicates that stability of self-esteem is an important psychological variable that can moderate differences between, and within, self-esteem levels (Baumgardner, 1990; Frey & Carlock, 1989; Kernis, Granneman & Mathis, 1989; Kernis et al., 1993; Kernis, 1993; Savin-Williams & Demo, 1983).

Kernis and his colleagues (1989; 1993) have investigated the importance of stability of self-esteem as a moderating variable of self-esteem. Stability of self-esteem is the "magnitude of fluctuations in momentary, contextually based self-esteem", (Kernis et al., 1993, pg 1190) and represents the variability in self feelings across time, with both high and low self-esteem individuals experiencing such fluctuations. Within low self-esteem, such fluctuations entail the chance of occasionally experiencing favorable feelings about oneself. Instability within high self-esteem entails more vulnerability to negative feelings about oneself. Whereas unstable low self-esteem individuals have the hope of increasing the positive nature of their self view, unstable high self-esteem individuals are faced with the potential of a drop in low self-esteem (Baumeister, 1993).

Explanations for Self-Serving Strategies

Several theories have been proposed to explain the differing patterns of self-serving strategies employed by high and low self-esteem individuals in reaction to evaluative feedback (cf. Shrauger, 1975). Evaluative feedback provides consistent or inconsistent information about an individual's competence or capabilities. Inconsistent information can lead one to engage in self-protective or self-enhancing strategies in order to avoid a loss of self-esteem. At the core of these distinctions are two competing theories: self-consistency and self-enhancement theory. According to self-enhancement theory, people are motivated to maintain a positive self view. When faced with negative self-relevant information, they will engage in strategies designed to alleviate the negative affect produced by the threatening information. Those individuals already experiencing a high level of unpleasant arousal, resulting from a low self image, should find almost any additional stimulation aversive, and, therefore, should be motivated to defend themselves against such stimulation (Epstein, 1976). Thus, low self-esteem individuals are believed to distort and bias self-relevant information in order to increase the positive nature of their negative self view and alleviate negative affect. On the other hand, self-consistency theory suggests that people engage in self-serving strategies that will maintain the consistency of their self view. Thus, high self-esteem individuals are more apt to display distortions of negative self-relevant information, and low self-esteem should distort positive information. These predictions follow from the assumption that both high and low self-esteem individuals attempt to maintain a consistency between the type of information and their self concept.

In an attempt to reconcile the discrepancies between these competing views, several

explanations have been proffered. One explanation is that some dependent measures (cognitive) support a self-consistency position and some measures (affective) support a self-enhancement position (Shrauger, 1975; Swann et al., 1987; and Kernis et al., 1993). Cognitive reactions to feedback include perceived competence and attractiveness of the evaluator as well as perceived accuracy or diagnositicity of the task. Affective reactions would include measures of mood states such as levels of anxiety and hostility. According to self-consistency theory, people's reactions are more likely to be driven by the consistency of the self-relevant information to one's self view. Thus, high self-esteem individuals regard success feedback as more accurate and self-descriptive whereas low self-esteem individuals regard failure feedback as more accurate and self-descriptive. According to self-enhancement theory, even though low self-esteem individuals find negative feedback to be accurate and self-descriptive, they should also be more anxious and hostile and engage in self-enhancing strategies to increase the positivity of that view. Swann et al. (1987) found this to be the case, except that the affective reactions of high and low self-esteem individuals did not differ. He concluded that affective measures offered weak support for self-enhancement strategies.

Kernis et al. (1993) also examined cognitive and emotional reactions to evaluative feedback due to level of self-esteem. Using a similar methodology to that of Swann et al. (1987), they proposed that in order to understand reactions to evaluative feedback it is also necessary to incorporate the stability of that self view into a theory about self-esteem reactions to evaluative feedback. The instability of high or low self-esteem indicates that one is uncertain of their positive or negative self view. Kernis et al. (1993) found that self-esteem instability was related to a greater perceived accuracy of the task.

Instability among high self-esteem individuals was found to be related to more favorable reactions to positive feedback, including viewing the feedback as more accurate and experiencing more positive affect. When negative feedback was received, instability among high self-esteem individuals was associated with more defensive reactions including derogation of the evaluator and the evaluative technique. Instability among low self-esteem individuals was related to greater perceived accuracy of the negative feedback but with less defensive reactions in comparison to stable low self-esteem individuals. These results are consistent with Kernis' previous correlational research employing Rosenberg's Self-Esteem and Stability Scales. In that study, unstable high self-esteem was indicative of having a greater propensity to experience anger and express hostility (Kernis et al., 1989).

The aforementioned studies have dealt with the self-serving behaviors of the individual when his or her personal identity is threatened. When the individual fails, unstable high self-esteem individuals demonstrate the most hostile, self-serving reactions. Research to date, however, has not looked at the influence of self-esteem instability within a group context where one's social identity is threatened. For instance, would unstable high self-esteem individuals engage in self-serving strategies in a situation where their group fails. If stability and level of one's self-esteem are related to the actions of the individual when faced with negative self-relevant information, then Kernis's approach might be important in understanding how self-esteem influences a person's evaluation of his or her group. This is particularly interesting because the issue of how self-esteem influences an individual's evaluation of his or her group is an issue which has been explored in the area of intergroup behavior.

Self-Serving Strategies and Intergroup Behavior

Henri Tajfel (1959, 1978, 1981) developed a social self-enhancement model of intergroup behavior in which self-esteem is referred to as the motivation for intergroup discrimination. According to this model, social memberships contribute to some aspects of an individual's self knowledge or one's 'social identity'. Social identity is defined by Tajfel as "that part of an individual's self concept which derives from his knowledge of his membership of a social group (groups) together with the value and emotional significance attached to that membership," (Tajfel, 1981 pg. 255). Being a member of a social category (group) results in an individual perceiving his or her group as being positively distinct from other groups. Such a perception helps an individual obtain or maintain a positive social identity (Tajfel & Turner, 1979; Tajfel, 1981). Because belonging to a social category contributes to one's social identity, then the need for self-enhancement would motivate a desire to positively evaluate that category. Thus, according to Tajfel's model, ingroup bias, or the favoritism of one's own group over another group, is a function of one's need for self-enhancement or achieving positive self-esteem. The favoritism for one's own group over another group exists not only when group membership is meaningful or important but also when group membership is arbitrarily determined, such as by the toss of a coin (Tajfel, 1978, 1981; Billig & Tajfel, 1973).

If patterns of intergroup bias are related to self-esteem motives, then intergroup bias should have different patterns of results for high and low self-esteem individuals. According to Wills (1981), individuals low in self-esteem should be more likely to display intergroup bias as they have a greater need for self-enhancement. Wills' theory of

downward comparison suggests that people experiencing negative affect from having a low self view can enhance their self-esteem through a favorable comparison to less fortunate others. These comparisons can occur on a passive basis (taking advantage of a less fortunate's situation) or on an active basis (the derogation of others). Yet evidence for this type of reactivity by low self-esteem individuals has not been clearly demonstrated within experimental intergroup research.

Correlational evidence demonstrates that low self-esteem individuals display more prejudice in terms of expressing more hostile racial attitudes than high self-esteem individuals (see Ehrlich, 1973; Wills, 1981; Wylie, 1979). Laboratory research indicates that high self-esteem individuals are more likely to engage in intergroup bias in terms of maximizing differences between groups when one group succeeds over the other.[1] A study by Crocker & Schwartz (1985) did find that individuals with low self-esteem rated the outgroup more negatively than high self-esteem individuals. However, there is no evidence of ingroup favoritism in that the rating of the outgroup was not relative to the rating of the ingroup. Opposite to this view, researchers (Abrams & Hogg, 1988; Crocker et al., 1987; Crocker & Luhtanen, 1990; Seta & Seta, 1992 and, in press) have found that it is high levels of self-esteem that produce greater discrimination in situations where the

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[1] Generally, ingroup favoritism exists when, under conditions favorable to the ingroup, the differences between the groups are maximized; under conditions that are unfavorable to the ingroup, the differences between the groups are minimized (see Brewer, 1979; Hogg & Abrams, 1988; Turner & Oakes, 1989). The favorableness of the comparison dimension is typically manipulated by providing positive and/or negative group performance outcomes (see Brewer, 1979 for review). In situations where individuals are members of successful groups, they will maximize the difference of their evaluations of the ingroup relative to the outgroup. When one is a member of an unsuccessful group, the difference in evaluations of the groups is minimized.

rating of the outgroup is relative to the ingroup.

One explanation for the apparent discrepancy in the intergroup bias literature is that both high and low self-esteem individuals engage in self-enhancement strategies but in a different manner (Brown et al., 1988) and under different conditions. According to Brown et al., (1988), high self-esteem individuals use direct forms of self-enhancement such as claiming to be superior when comparing oneself to others. Since low self-esteem individuals believe a positive identity would be difficult or impossible to maintain, they engage in indirect or 'roundabout' forms of self-enhancement. This includes 'aligning themselves' with others that succeed and 'distancing themselves' from those who fail. This explanation is consistent with Wills' (1981) theory of downward comparison which suggests there are active (derogation of others) and passive (taking advantage of a less fortunate other's situation) forms of self-enhancement. In their research, Brown et al., (1988) found greater ingroup favoritism by high self-esteem than low self-esteem participants when comparing the merits of one's own group's performance (own-group) to the performance of the other group in the room (out-group). However, when comparing the merits of another group's performance who has the same label as one's own group (in-group) to an out-group's performance, low self-esteem individuals demonstrated greater intergroup bias. Brown et al., (1988) argued that active involvement in the group is an important factor for direct and indirect self-enhancement to occur. It could also be argued that when the performance outcome of the group includes personally relevant information (one's own performance) it is more important and self-relevant than when personal feedback is not included.

Blaine & Crocker (1993) point out that distortions of self-relevant information

depends on the relevance of that information to the individual. Individuals will "distort information in a self-serving manner when unconstrained by what they believe to be true of themselves" (pg. 60). This is consistent with other views (Brown et al., 1988; Taylor & Brown, 1988) which imply that low self-esteem individuals are incapable of engaging in direct forms of self-enhancement due to reality constraints. Since distortion of self-relevant information depends on the relevance of the information to the individual, then it would follow that the importance or diagnosticity of the task to one's self concept might also be an important factor to consider. Previous research which investigated the relationship of self-serving strategies and reactions to evaluative feedback has typically employed a task which purports to measure either social aptitude (Crocker et al, 1987; Crocker & Luhtanen, 1990; Seta & Seta, 1992, and in press), social sensitivity (Shrauger & Rosenberg, 1970), social competence (Swann et al., 1987; Kernis et al., 1993) and creative ability (Taylor & Brown, 1988). These tasks could be considered highly relevant to or diagnostic (important) of one's self concept. One possibility is that receiving highly relevant, negative information about oneself would impede low self-esteem individuals from engaging in self-serving strategies because the information is extremely threatening to one's self view. Thus, although motivated to increase the positivity of that low self view, the severity of the highly relevant, negative information constrains low self-esteem individuals from being able to engage in self-enhancement strategies. However, it may be the case that if you lessen the severity of the threat by indicating that, although they failed, the task is unimportant or less relevant to one's self concept then, not only are they motivated to self-enhance but they are also capable. Whether the task is highly self-relevant or not should have little constraining effects on a positive self view engaging in

self-serving strategies.

In addition to varying the relevance of the feedback to one's self view, the effect of stability of self-esteem within the intergroup situation has not been considered in any of these views. Instability has been found to moderate the reactivity of high and low self-esteem individuals in evaluative situations (see Kernis, 1993 for a review). Instability among high self-esteem individuals is related to a greater tendency toward self-enhancement in response to positive evaluations. Because their self view is fragile, though positive, unstable high self-esteem individuals should demonstrate greater evidence of self-enhancement than a stable positive self view. In the intergroup situation, you would expect to find a greater maximization of group differences by unstable high self-esteem individuals relative to stable high self-esteem when the performance outcome of the ingroup is positive. When faced with negative self-relevant information, unstable high self-esteem individuals react with greater defensiveness and adverse reactions. This could result in two types of outcomes in the intergroup situation. One reaction would be to minimize the differences between the failing ingroup and the outgroup. However, another reaction, might be to distort the importance of doing well on the task as well as distort the perceived accuracy of the task, thereby 'undermining the threat's legitimacy' (Kernis et al., 1993 pg. 1191) and indicating the engagement of self-serving strategies. The validity of a task should be uninfluenced by whether an individual has failed or succeeded: a task measures what it purports to measure regardless of how well or how poorly an individual performs. If the assessment of the accuracy of the task is affected by feedback about their performance, this would provide supporting evidence that self-serving strategies were employed.

Instability within an already low self view is related to avoiding the permanence of that low self view. Being a member of a successful group then would allow unstable low self-esteem individuals a chance to enhance the positivity of their low self view. Stable low self-esteem individuals, on the other hand, would find being a member of a successful group inconsistent with their low self view and therefore would reject or devalue the positive self-relevant information. Low self-esteem instability is also associated with greater self-protective efforts in response to negative events but not in the form of defensive reactions toward others. Thus, in the intergroup situation, these individuals should be evenhanded in their ratings of groups. However, their rating of their own failing group should be higher than unstable high self-esteem, as their reaction towards the source of the evaluation is not a defensive response. Consistent with predictions of high self-esteem individuals, another reaction would be to distort the importance of doing well on the task as well as the validity ascribed to the assessment of that task after failure (success). However, opposite to high self-esteem individuals who are likely to engage in this self-serving strategy when the feedback is highly self-relevant, low self-esteem individuals will react in this manner when the task is not self-relevant. This is because, under conditions of highly relevant, negative feedback, low self-esteem individuals are constrained from being able to engage in self-serving strategies. When the feedback is less relevant to one's self view, the negative feedback is not as threatening allowing for low self-esteem individuals to engage in self-enhancing strategies in order to increase the positivity of their self view.

The following research was designed to provide converging tests of these hypotheses. Direct measures of self-serving strategies include one's perception of the

importance of performing well on the task as well as the perceived accuracy of the task assessments. Less direct measures of self-serving strategies include affective measures in addition to intergroup bias effects. In order to manipulate the relevance or importance of the performance feedback to one's self concept, a symbol task was employed.

CHAPTER 2

METHOD

Subject Selection: This study was interested in identifying stable and unstable high and low self-esteemed individuals. During mass screening, 912 female students over three consecutive semesters were administered the Rosenberg Self-Esteem Scale (1965) and the Rosenberg Stability Scale (1979). The Self-Esteem Scale is a 10 item Likert type scale with each item having four possible responses: strongly agree, agree, disagree, strongly disagree. These responses, rated 1 to 4, have possible scores ranging from 10 to 40, with 40 representing the highest level of self-esteem. The Stability Scale consists of five questions with a possible score ranging from 0, representing extreme instability, to 5, representing extreme stability.

Students who scored 2 or 3 on the Stability Scale were identified in this study as "unstable", and "stable" if they scored 4 or 5.[2] Students were considered having "high self-esteem" with a score of 32 or greater and "low self-esteem" with a score of 30 or less based on the Self-Esteem Scale.[3] Thus, four groups of potential participants were

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[2] Scores of 0 or 1 were excluded due to the low frequency of occurrence and extreme skewness towards stability (-.8).

[3] Kernis et al. (1993) used a regression analysis on the full range of self-esteem and stability scores. Swann et al. (1987) selected subjects using those who scored on the extreme ends of the scale. Since the interest of this study was the reactions of high or low self-esteem participants, subjects with a score of 31 (the median) were excluded. We did this for two reasons. First, as suggested by Baumeister (1993), self-esteem is positively skewed. Accordingly, the hypothesis explored in this paper relates most directly to those

identified: unstable low self-esteem, unstable high self-esteem, stable low self-esteem, and stable high self-esteem.

To maintain anonymity of the student's identity, the social security numbers of potential participants were posted indicating eligibility for participation in this study. Due to the small number of stable low self-esteem and unstable high self-esteem individuals within this population, it was necessary to repeat this selection process across three semesters. [There was no change in the populations over the semesters as indicated by Table 1, Descriptive Statistics.] In all, 180 females participated in this study in partial fulfillment of research requirements. Only female students were used because they represent the majority of the subject pool and to maintain homogeneity of the experimental groups. Participants were run in groups ranging in size from 5 to 16.

Design: The factorial design of this study included 2 levels of global self-esteem (high and low) x 2 levels of self-esteem stability (stable and unstable) x 2 types of group task feedback (success and failure) x 2 levels of self-relevance of task feedback (important and unimportant) as between factors.

Procedure: To establish a minimal intergroup situation, upon arrival, participants were asked to select a folded piece of paper (A or B) from a box and to sit at the table which corresponded to their selection. They were told this selection process was to allow for the random assignment of individuals to either Group A or Group B. This procedure resulted in two groups (A and B) sitting at large tables facing one another.

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participants having relatively extreme personality scores. Therefore, consistent with Swann et al. (1987), we have also used an analysis of variance (ANOVA) as the form of analysis, treating stability and self-esteem as between factors.

Participants were told that the purpose of the study was to investigate how personal perceptions are related to group behavior. For the purpose of matching current information with information obtained during mass screening, it was necessary for students to write their social security number on all items during the experiment. They were reassured that only the experimenter would be able to identify the information and that all information would remain confidential and anonymous.

After informed consent, participants were asked to fill out a group of forms. [See Appendix B for a copy of all materials.] The forms consisted of the Rosenberg Self-Esteem Scale, the Rosenberg Stability Scale, and a self-reported measure of their feelings at that moment. Although subjects were pre-assessed and identified on the dimension of global self-esteem and stability of self-esteem, these scales were re-administered at the time of the experimentation to insure the consistency and reliability of the scales. The measure of their feelings at that moment was used to establish a baseline measure of anxiety and hostility. The measure consisted of ten adjectives selected from the Multiple Affect Adjective Checklist (MAACL; Zuckerman, 1960; Zuckerman & Lubin, 1965). The 10 adjectives represented hostility (afraid, fearful, amiable, frightened, and disagreeable) and anxiety (angry, calm, mad, nervous, and cooperative). These 10 traits were embedded within two different lists containing 14 additional neutral traits. Two lists were used: one to establish an initial baseline measure and the other to measure a change in anxiety and hostility due to the manipulation [See Appendix B for two lists of traits]. The order of these lists were counterbalanced across subjects. Subjects rated each adjective on a 7 point scale (1 being not at all characteristic of how I feel now and 7 being very characteristic). This measure has been successfully used in previous research (e.g.,

Greenberg et al., 1992; Kernis et al., 1993; Swan et al., 1987; Testa & Majors, 1990). The target traits were scored by reversing the score of the positive traits and tallying a separate total score for anxiety and for hostility.

Participants were then handed an instruction sheet accompanying a task. Because all experimental conditions were represented in each group, experimental instructions were given in written form along with neutral verbal instructions to facilitate understanding. They were reminded that this experiment involves being a member of Group A or B which consisted of approximately eight members. To maintain perceptual consistency of group size, participants were told that their group not only consisted of people in this room but people in other sessions as well.

Participants assigned to the 'important' condition read the following:

> You and your group have been given the Berkeley Abstract Reasoning Task, otherwise known as the BART. This task was developed to assess abstract reasoning ability and overall intelligence. The BART has been found to be a reliable indicator of people's ability to process abstract symbols and integrate information to make perceptual judgments. The BART also assesses overall intellectual ability.

Participants led to believe the task was unimportant were told they had been given "a symbol task", that "this task has no implications for personal abilities" and is "not related to abstract reasoning ability or overall intelligence." They were told it was a filler task sometimes used in experiments and we wanted to get their reaction to the task.

The task actually was a bogus task successfully employed in previous research (Seta, Seta & Donaldson, 1992). It consists of four target symbols [! # ^ and (] embedded within other typewriter symbols [e.g., @ % * ? $]. The goal of the task is to count the

number of times these four target symbols appear in each row, as quickly and as accurately as possible. A score on this task consists of the total number of target symbols accurately identified within a specified but unannounced time frame (3 minutes).

The tasks were collected and handed to an assistant to score while subjects waited. Actually, the experimenter and the assistant were organizing pre-determined feedback sheets to hand back. After a short delay, the experimenter re-entered with the test results. In addition to a written instruction sheet, each subject received the Task Result Sheet (marked with their social security number) indicating how their group performed. The written instructions for the important condition stated "enclosed is the result of how you and your group performed on the BART" or "on the task" for the unimportant condition.

The evaluation manipulation involved a combination of performance feedback and social comparison information. Participants given success feedback read that their group's average score (including their own) was in the 80th percentile which means that "your group did better than 80% of the people who have taken this task". Failure feedback stated their group's average score including their own score was in the 30th percentile which means that "70% of the people who have taken this task did better than your group". In addition, participants read that an average score on the task was in the 57th percentile and a UNC-G's student average score was in the 63rd percentile. Further interpretation of the scores was guided by the following key:

PERCENTILES	
0-30	Below average. On the average this group is lacking in the ability to identify quickly and accurately abstract symbols. This

	inadequate abstract reasoning ability may be indicative of cognitive and intellectual deficits among the group members.
40-70	Average. On the average, this group has reasonable ability in identifying quickly and accurately abstract symbols. This indicates adequate intellectual and abstract reasoning ability.
80-100	Above average. On the average, this group is intelligent and conceptual. This indicates superior ability in abstract reasoning and intellectual situations.

Dependent Measures: Included with the task results were additional measures participants were asked to fill out. Subjects rated on a 7 point scale how characteristic a list of eight positive and eight negative traits were of themselves, their group, the other group, and persons who obtained above- or below-average scores on the task. Each target group was rated on separate sheets. The order of rating their own group or the other group was counterbalanced throughout. The evaluation was determined by subtracting the total negative trait values from the total positive trait values. If a value for a particular trait was missing, the average value corresponding to that individual's rating of similarly evaluative traits was entered into the composite score. Thus, a composite score for each group could range from +48 to -48.

Participants were further asked to assess their reaction to the score obtained by their group. Written instructions reminded them of their group's performance (including their own) and the importance (or unimportance) of the meaning of the score. Thus, subjects in the important condition were told this task has been shown to indicate superior ability or deficits in abstract reasoning and intellectual situations. Participants in the unimportant condition were reminded that this task has not been shown to indicate superior ability or deficits in abstract reasoning and intellectual situations.

The scale used to assess their reaction consisted of 24 adjectives from the Multiple Affect Adjective Checklist. Embedded within the 24 adjectives were the same 10 adjectives previously used to assess a baseline level of anxiety and hostility. Two lists (A or B) containing the 10 adjectives and 14 neutral adjectives were used. If participants received list A upon entering the experiment, they were given list B to assess their reaction to the manipulation. Participants were also asked to assess a) how satisfied they were with their group's performance, b) the percentile of their own probable performance, c) how important it was to them for their group to do well, d) how important it was to them personally to do well, and d) the validity of the task for assessing overall intelligence. As a manipulation check, they were also asked if their group's score was lower than that of the average UNC-G score.

CHAPTER 3

RESULTS

Reliability of Stability and Level of Self-Esteem Scores

Rosenberg (1965) self-esteem scores and stability scores were assessed during mass screening (Time 1) as a means of identifying potential participants. These scales were re-administered at the time of the experiment (Time 2) in order to insure that the classification of participants had not changed. For Time 1 and Time 2, level of self-esteem scores correlated at r=.75, and stability self-esteem scores correlated at r=.53. Since both stability and level of esteem scores did not change significantly over time, scores that originally identified participants were used as the measure for further analyses.

Manipulation Checks

To assess the effect of the manipulation for feedback participants were asked to indicate their response to several questions using a 7 point scale, where 1 indicated *not at all* and 7 indicated *very much.*

An analysis of variance (ANOVA) performed on the satisfaction of their group's performance revealed a significant main effect of feedback, $F(1,162)=454.21$, $p<.0001$. Participants told that their group had failed were significantly less satisfied with their group's performance ($M=2.34$) than participants who were told their group succeeded ($M=6.34$). Similarly, the majority of participants in the success feedback condition disagreed that their group's score was lower than the average UNC-G student (75 true

and 5 false) whereas participants in the failure feedback condition agreed with this statement (98 true and 2 false). Thus, the feedback manipulation was successful.

When given feedback information about the performance of the individual's group, individuals were told that the group's average score included their own score. Participant's were not, however, given information about their own personal performance or the performance of the other group. The experimenter asked participants what percentile they believed their own personal score may have been. Participants in the group success feedback condition believed they had also individually performed above-average (own-score M=77.21 percentile) whereas those in the group failure feedback condition believed they had also individually performed below-average (own-score M=49.14 percentile), $F(1,163)= 132.21$, $p<.0001$. Furthermore, in the failure condition, high self-esteem individuals believed that their own performance was closer to the average score of 57% than low self-esteem individuals (HSE M=53.44 and LSE M=43.98, respectively), $F(1,163)=5.16$, $p<.03$. This supports the results of several studies (see Baumeister, 1993a for a review) which contend that low self-esteem individuals feel less competent than high self-esteem individuals.

Direct Measures of Self-Serving Strategies: Evaluations of Task Importance and Task Accuracy

One strategy of protecting or enhancing one's self view would be to dismiss the importance of doing well on the task when one fails and bolster the importance of doing well when one succeeds. Another strategy would be to dismiss (or bolster) the credibility of the validity ascribed to the assessment of that task after failure (or success) feedback.

The employment of these strategies should be further affected by whether an individual's self-esteem is high or low, stable or unstable.

Participants were asked how important it was to them 'to have personally done well' on the task (importance of personal performance), and for 'their group to have done well' on the task (importance of group performance). An analysis of variance on the importance of personal performance measure revealed a significant self-esteem x feedback x task importance interaction, $F(1,164)=4.84$, $p<.03$. As can be seen in Table 2, when the task was unimportant, low self-esteem individuals dismissed the importance of personally performing well on the task when they failed ($M=4.09$) and bolstered the importance of personally performing well when they succeeded ($M=5.04$), $F(1,164)=3.98$, $p<.05$, but not when the task was important ($F=5.04$, $S=5.20$). High self-esteem individuals, on the other hand, did not significantly alter the importance of personally performing well as a function of success or failure feedback when the task was unimportant ($F=5.11$, $S=5.35$, $F<1$). However, when the task was important, high self-esteem individuals had a tendency to dismiss the importance of doing well ($F=4.93$, $S=5.76$, $F(1,164)=3.04$, $p<.08$). These results indicate that both high and low self-esteem individuals are capable of engaging in self-serving strategies but the employment of these strategies depends on how relevant the evaluative feedback is to their self view. High self-esteem participants engage in self-serving strategies when the task is highly relevant to their self view. Performance on a relatively unimportant task is less relevant to a positive self view, therefore, requires no self-serving response. For low self-esteem participants, performance on an unimportant task allows for the individual to engage in self-serving biases. When the task is important, however, they seem unable to do so.

A second Anova was performed on the importance of the group's performance measure. This analysis revealed a significant self-esteem stability x level of self-esteem x feedback x task importance interaction, $F(1,164)=5.73$, $p<.02$, indicating that the ratings of the importance of the group performing well enhanced the sensitivity of both high and low self-esteem participants to the evaluative feedback, but in an opposite pattern. As indicated by Table 3, unstable high self-esteem participants dismissed the importance of the group's performance when failing an important task ($F=3.36$) and bolstered the importance of the group's performance when succeeding on an important task ($S=5.17$), $F(1,164)= 6.75$, $p<.01$. When the task was unimportant, there was no significant difference between the ratings of the group's performance due to feedback ($F=4.5$, $S=4.29$, *ns*). Unstable low self-esteem individuals displayed the same pattern of dismissing and bolstering the importance of the group doing well ($F=2.92$, $S=4.92$) due to feedback but only when the task was unimportant, $F(1,164)=8.23$, $p<.01$. When the task was important, unstable low self-esteem did not differ their ratings of the importance of the group doing well because of feedback ($F=4.13$, $S=4.0$, *ns*). Stable self-esteem participants, whether high or low, did not engage in either strategy of dismissing or bolstering the importance of their group performing well, regardless of the importance of the task or feedback about one's performance. Thus, if one is secure about their self view, whether positive or negative, self-serving mechanisms are not employed.

A similar pattern of results also emerged on the assessment of task accuracy measure, as can be seen from Table 4. The analysis of variance revealed a significant stability of self-esteem x level of self-esteem x feedback x task importance interaction, $F(1,164)=3.89$, $p<.05$. Unstable high self-esteem participants indicated that the task was

less accurate at assessing intelligence when they failed an important task (F=1.91) and bolstered the accuracy of the assessment when they succeeded on an important task (S=3.17), F(1,164)=4.31, p<.05. When the task was unimportant, however, there was no difference in the assessment of task accuracy due to feedback (F=2.17, S=1.86, *ns*). Unstable low self-esteem individuals displayed the same pattern of dismissing and bolstering the accuracy of the task's assessment of intelligence (F=1.58, S=3.33) but only when the task was unimportant, F(1,164)=8.33, p<.01. When the task was important, unstable low self-esteem participants' ratings of the task's accuracy did not differ across feedback condition (F=2.13, S=2.67, *ns*). On the other hand, stable high self-esteem participants did not engage in either strategy of dismissing or bolstering the accuracy of the task's assessment, regardless of the importance of the task or feedback about one's performance. Stable low self-esteem participants, however, rated the accuracy of the task lower when they failed and bolstered the rating of accuracy when they succeeded, regardless of the whether the task was important or unimportant.

This pattern of data is particularly illuminating in light of the inconsistent patterns of data which have suggested that low self-esteem individuals are constrained in their ability to engage in self-enhancing strategies (Brown et al., 1988; Taylor & Brown, 1988; Crocker et al., 1987; Blaine & Crocker, 1993; Kernis et al, 1993). If it is true that low self-esteem individuals are not capable then, whether the task is important or unimportant, you should find that low self-esteem individuals do not distort the importance or accuracy of the task. This was not the case in the present study.

Indirect Measures of Self-Serving Strategies: Affect and Intergroup Bias

Affect

Univariate tests of initial baseline measures of anxiety and hostility revealed significant differences associated with stability and level of personal self-esteem.

Anxiety: A significant main effect for stability indicated unstable self-esteem was associated with higher baseline levels of anxiety ($M=13.21$) than stable self-esteem ($M=9.17$), $F(1,130)=10.51$, $p<.002$. Interestingly and counter to expectations, anxiety levels were not affected by one's level of esteem ($F<1$). That is, low self-esteem individuals did not exhibit significantly higher baseline levels of anxiety than high self-esteem individuals (LSE=12.45 and HSE=10.76, $p<.21$).

Hostility: A similar pattern emerged for hostility. There was a significant main effect for stability of self-esteem, with unstable self-esteem participants ($M=11.55$) displaying significantly higher baseline levels of hostility than stable self-esteem participants ($M=9.93$), $F(1,130)=3.98$, $p<.05$. The same results were apparent for level of self-esteem, with low self-esteem ($M=11.70$) being associated with higher levels of hostility than high self-esteem ($M=9.73$), $F(1,130)=6.54$, $p<.02$. Thus, hostility is related to stability and level of self-esteem, with unstable self-esteem and low self-esteem participants displaying higher levels of hostility than stable and high self-esteem participants.

That the amount of anxiety and hostility one experiences is related to stability and level of self-esteem in the absence of direct evaluative self-relevant information is an interesting finding. Kernis (1993), has not demonstrated that level of self-esteem was

related to a propensity to experience hostility in situations in which individuals were given self-relevant information. In addition, Kernis et al. (1989) established correlational evidence that hostility proness (as indicated by elevations on Buss-Durkee Hostility Inventory) is a function of the moderating effect of stability on level of self-esteem. Although stability and level of self-esteem had main effects on one's level of hostility, these present results do not support the interactive effect found by Kernis et al. (1989). In regards to anxiety, this present study also did not find that a low self view was associated with higher levels of anxiety than a positive self view. The combination of these findings supports the contentions of Watson & Clark (1984) that heightened levels of reactivity due to the effect of stability and/or level of self-esteem when given evaluative self-relevant information could be due to a dispositional tendency in negative affect.

Post-Manipulation Levels of Anxiety and Hostility

Significant main effects were found on post-manipulation measures of anxiety and hostility. Overall, the experimental situation significantly reduced overall feelings of anxiety (Anx1=11.30 vs Anx2=9.36), $F(1,130)=33.45$, $p<.0001$ while significantly increasing feelings of hostility (Host1=10.66 vs Host2=12.19) $F(1,130)=15.91$, $p<.0001$. Because of the significant differences in baseline measures of anxiety and hostility, further analyses were performed using baseline measures of anxiety and hostility as covariates. Thus, all further means (M) discussed are adjusted means.

Post-Manipulation Levels of Anxiety

The analysis of covariance on self-esteem revealed a significant main effect, $F(1,129)=4.23$, $p<.05$. This analysis revealed that, low self-esteem individuals exhibited

significantly higher levels of anxiety (M=9.91) than high self-esteem individuals (M=8.68). There was no main effect due to the stability of self-esteem. The marginally significant esteem x stability interaction further indicated that instability moderates the anxiety levels of high and low self-esteem participants, $F(1,129)=3.46$, $p<.07$. This interaction is due to the fact that unstable low self-esteem individuals tended to have significantly higher levels of anxiety than stable low self-esteem individuals (unstable LSE=10.29, stable LSE=9.54); whereas an opposite pattern emerged for high self-esteem individuals (unstable HSE=7.94, stable HSE=9.42). Although neither of these comparisons are significant, the effects were in the opposite direction and contributed to the esteem x stability interaction.

The effect of feedback on post-manipulation measures of anxiety also showed a weak but expected trend (failure=9.81, success=8.79), $F(1,129)=2.93$, $p<.09$). Although it is reasonable to expect that negative self-relevant information would have increased anxiety, this effect was weak. One possible explanation may be that anxiety was reduced as a result of the process of rating the target groups. Another explanation may be that the reduction in anxiety is indicative of an overall lowering of experimental anxiety.

Manipulating task importance produced a significant interaction between self-esteem and task importance, $F(1,129)=4.50$, $p<.04$. Whether individuals were told the task was important or unimportant did not significantly affect the level of anxiety expressed by low self-esteem participants (Important=9.57, Unimportant=10.26, *ns*). However, for high self-esteem participants, an important task was associated with a higher level of anxiety than was the case for an unimportant task (Important=9.61, Unimportant=7.75). Furthermore, when the task was unimportant, low self-esteem

individuals expressed higher levels of anxiety than high self-esteem individuals (HSE=7.75, LSE=10.26). It could be that the unimportance of the task in this experimental situation created ambiguity for low self-esteem participants thereby increasing their levels of anxiety.

Post-Manipulation Levels of Hostility

Different from anxiety, evaluative feedback was demonstrated to have a significant effect on one's level of hostility, $F(1,129)=22.05$, $p<.0001$. Negative self-relevant information significantly increased levels of hostility ($M=14.18$) whereas positive self-relevant information did not ($M=10.47$). Since one's self view was bolstered and not threatened, it is not surprising that success feedback did not produce increased feelings of hostility.

There was a marginally significant interaction between feedback and level of self-esteem, $F(1,129)=3.11$, $p<.08$. Planned comparisons revealed that feedback, whether threatening or bolstering, affected the hostility level of high self-esteem individuals to a greater extent ($F=15.00$, $S=9.91$) than low self-esteem individuals ($F=13.35$, $S=11.04$), $F(1,129)=7.50$, $p<.01$.

Affective reactions to evaluative feedback has also been investigated by others (Swann et al.,1987; Kernis et al., 1993). Swann et al (1987) found that participants receiving negative feedback were more anxious and hostile than those receiving positive feedback. These affective reactions were unaffected by the positivity or negativity of their self view and were concluded to be weak support for self-enhancement strategies. Kernis et al. (1993) also measured affective reactions to evaluative feedback by summing the responses to the individual positive and negative words; measures of hostility and

anxiety were not subcategorized. Kernis et al. (1993) found that individuals receiving positive feedback had more positive emotions and less negative emotion than those receiving negative feedback. Furthermore, unstable high self-esteem individuals indicated no affective reaction (positive or negative) following negative feedback but indicated greater positive affect following positive feedback. Instability was unrelated to measures of affect in low self-esteem individuals.

Our results support the conclusion that a threat toward one's self view significantly increases one's feelings of hostility and bolstering one's self view reduces overall affect. As would be expected, low self-esteem is related to significantly higher levels of anxiety than high self-esteem. Stability, however, was unrelated to post-manipulation levels of affect. These post-manipulation measures of affect are opposite to the baseline measures where higher anxiety levels were indicated by stability of self-esteem but not by level of self-esteem. Interestingly, although initial levels of anxiety were held constant, significant differences of anxiety due to level of self-esteem still emerged. This indicates that level of self-esteem is responsive to external situational cues whereas stability seems unaffected. High self-esteem individuals were more responsive to evaluative feedback as indicated by the high level of hostility when their positive view is threatened and the lower level of hostility when that self view is bolstered.

Intergroup Bias Effect

Participants in this study belonged to two different types of groups. The first group was the minimal, or randomly assigned group. The second type of group consisted of being a member of a conceptually similar group. That is, if you and your group failed

on the task then you would also be a member of a group of below-average scorers. Likewise, if you and your group succeeded, your conceptually similar group would be above-average scorers.

To analyze the intergroup bias effect for the minimal group, ratings of Group A and Group B were coded as to whether Group A was a participant's own group (ingroup) or the other group (outgroup). Ratings of above- and below-average scorers were also coded as to whether the individual received success or failure feedback. Thus, when the participant's group received success feedback, the above-average group was the conceptual ingroup; and the below-average group the conceptual outgroup. The reverse would be true in the failure feedback condition, with the below-average group becoming the ingroup and the above-average group the outgroup. Ratings of ingroup-outgroup members (in the minimal and conceptual situation) were analyzed with a repeated measures ANOVA, with stability, self-esteem, evaluative feedback, and task importance as between-subjects factors and target of rating variables (ingroup/outgroup) as a within-subjects factor.

Intergroup Bias Effect within the Minimal Group

In the minimal intergroup situation, participants did not show favoritism towards the ingroup (M=18.30) over the outgroup (M=18.35). That is, merely being a member of this randomly assigned group did not motivate a desire to positively evaluate the ingroup relative to the outgroup. This finding does not replicate the ingroup bias effect which has previously been demonstrated in the minimal intergroup paradigm (Brewer, 1979; Crocker et al., 1987; Crocker & Luhtanen, 1990; Diehl, 1990; Hogg & Abrams, 1988; Turner, 1981; Seta & Seta, 1992, and in press).

In summarizing the findings of the effect of feedback on ingroup-outgroup distinctions, Brewer (1979) found that individuals maximize favorable comparisons and minimize unfavorable comparisons between groups. Therefore, when one's group fails, the difference in ingroup-outgroup ratings is minimized and the difference is maximized when one's group succeeds. In this study, feedback about the performance of one's own group affected the evaluation of both the ingroup and the outgroup resulting in an interaction between feedback and target of evaluation, $F(1,163)=12.19$, $p<.0006$, as demonstrated in Table 5. Although both target groups were rated unfavorably under conditions of failure, planned comparisons revealed that participants rated their own failing group significantly more negatively ($M=14.32$) than the outgroup ($M=16.78$), $F(1,163)=6.90$, $p<.01$. When one's own group succeeded, the succeeding ingroup is rated in a more significantly positive way ($M=23.34$) than the outgroup ($M=20.34$), $F(1,163)=9.17$, $p<.005$. Although individuals maximized the differences between groups under success conditions, they did not minimize differences under failure conditions. In fact, under failure conditions, the outgroup is rated in a significantly more positive manner than the ingroup. Therefore, although an intergroup bias effect due to self-relevant feedback was demonstrated, the bias did not result in ingroup favoritism.

It should be stressed that, in the present study, feedback about the other group's performance outcome was not given, therefore, we do not know for certain what inference participants made concerning the performance of the other group. However, as indicated by the significant main effect of feedback on the evaluation of the outgroup, failure feedback about one's own group performance yielded lower ratings of the outgroup ($M=16.78$) than was obtained with success feedback ($M=20.34$), $F(1,163)=5.96$,

$p<.02$. This suggests that ingroup feedback does affect the evaluation of the outgroup even without the context of direct comparative information. This effect is not a generalization of negative or positive affect towards others. If it was merely a generalization of affect, then significant differences between ratings of the groups due to feedback would not have occurred.

Although feedback failed to produce the expected ingroup bias effect, favoritism for one's own group relative to the outgroup was found to be affected by level of self-esteem, as indicated by the significant self-esteem x target of evaluation interaction, $F(1,163)= 5.75$, $p<.02$. As can be seen in Table 6, this interaction is due to the fact that, regardless of evaluative feedback, low self-esteem individuals tended to rate the outgroup more negatively ($M=16.57$) than their own ingroup ($M=18.25$), $F(1,163)=3.16$, $p<.05$ whereas an opposite pattern emerged for high self-esteem participants. High self-esteem participants tended to rate the ingroup more negatively ($M=18.34$) than the outgroup ($M=19.90$). Although neither one of these comparisons were significant, the effects were in the opposite direction and the interaction involving those measures was significant. In addition, low self-esteem participants rated the outgroup more negatively ($M=16.57$) than high self-esteem participants ($M=19.90$), $F(1,163)=5.07$, $p<.05$; whereas high and low self-esteem persons did not differ on their ratings of the ingroup (HSE=18.34, LSE=18.25, *ns*). This finding supports Wills' (1981) contention that low self-esteem individuals have a greater need to enhance their self-esteem, and therefore a greater need to engage in intergroup bias. In the situation where no direct comparative information is available, this enhancement tendency can be obtained by derogating the outgroup in order to create a more favorable social comparison for one's own group.

Although this was the case for low self-esteem participants, it was not the case for high self-esteem individuals in this study.

That the intergroup bias effect was found with low self-esteem individuals but not high self-esteem individuals is interesting but these data should be interpreted with caution for several reasons. These data are counter to the literature on intergroup bias effects (Crocker et al., 1987; Crocker & Luhtanen, 1990; Seta & Seta, 1992, and in press) which found evidence of high self-esteem participants displaying intergroup bias but not low self-esteem participants. In this study it is very possible that high and low self-esteem individuals made very different inferences about the performance of the outgroup since feedback about the outgroup's performance was not given. In the Seta & Seta papers (1992, and in press) when participants were given explicit feedback about both the ingroup and the outgroup, it was high rather than low self-esteem participants who demonstrated the most pronounced intergroup bias effect. Consistent with the results of Seta & Seta, Crocker also found that high self-esteem participants were more likely to engage in intergroup bias than low self-esteem participants. Counter to the work of Seta & Seta, however, Crocker did not give participants feedback about the outgroup's performance. Therefore, her methodology is somewhat similar to those employed in this current study. However, there is a major difference between Crocker's procedure and the procedure in this study. In the present study, participants were selected and knew they were selected specifically because of personality factors. Therefore, in this study, low self-esteem participants may have thought that regardless of the group they were in, others in the room were likely to have also failed. Conversely, high self-esteem subjects may have thought others in the room were like them and succeeded on the task

regardless of their group's performance. If high and low self-esteem subjects indeed made these inferences, than the strength of the intergroup bias would be stronger for low self-esteem than high self-esteem individuals, as was the case in this study.

Intergroup Bias Effect within the Conceptual Group

As expected, ratings of the conceptual group were conceptually similar to those in the minimal group. Analysis of the ratings revealed a significant main effect for target indicating that above-average scorers were rated more positively (M=23.13) than below-average scorers (M=8.82), $F(1,164)=152.44$, $p<.0001$.

An intergroup bias effect was also revealed by a significant target x feedback interaction, $F(1,164)=28.01$, $p<.0001$. An indication of ingroup favoritism on this measure would be a maximization of differences between above- and below-average scorers under success feedback conditions and a minimization of differences between above- and below-average scorers under failure conditions. Participants receiving success feedback rated above-average scorers (M=26.23) more positively and below-average scorers (M=4.67) more negatively than participants receiving failure feedback (M=20.65 vs M=12.14, respectively). See Table 7.

The marginally significant target x feedback x self-esteem interaction further indicated that the tendency to engage in intergroup bias was stronger for low than for high self-esteem participants, $F(1,164)=3.05$, $p<.08$. Of interest in this study, is comparing how low self-esteem individuals engage in social comparisons relative to high self-esteem individuals. It may be that both show ingroup favoritism but one does this to a greater extent than the other. One way to look at this would be to compare at the evaluative spread within conditions. That is, compare the difference between how low

self-esteem participants evaluate the ingroup and outgroup relative to the evaluations of the same groups by high self-esteem participants. Planned comparisons of the evaluative spread confirmed that there was a greater intergroup bias effect for low self-esteem than high self-esteem participants. Low self-esteem participants maximized the difference in the rating of their own ingroup relative to the outgroup when the comparison was favorable (evaluative spread in success condition=24.93) and minimized the difference in ratings when the comparison was unfavorable (evaluative spread in failure condition=18.37). This difference between evaluative spreads was significant $F(1,164)=7.79$, $p<.01$. See Table 8.

There were no further significant effects on intergroup bias for the minimal or conceptual groups. An intergroup bias effect due to the interactive effect of group evaluations, self-esteem and group feedback is typically found in this type of research. The fact that such an effect was not obtained in this study could be due to the lack of comparative information about the other group's performance and the apparent lack of reactivity to negative self-relevant information.

Self-Esteem Reactivity and Evaluative Feedback

Of particular interest in this study was whether individuals receiving evaluative group feedback would react with the same intensity as Kernis' participants who received individual feedback. That is, would the discrepancy in the ratings of groups be due to the stability and level of one's self-esteem when presented with evaluative self-relevant information.

The analysis of variance revealed a significant main effect of feedback within the

minimal group situation demonstrating support for the successful manipulation of group feedback. When given failure feedback about one's own group performance, participants were significantly more negative towards both target groups (M=15.54) than when told their group succeeded (M=21.82), $F(1,163)=17.91$, $p<.0001$. There was no main effect of feedback on the ratings of the conceptual group, indicating feedback did not distort the ratings or above- or below-average individuals.

The significant interaction between feedback and self-esteem for both the minimal and conceptual groups indicated that reactions to success and failure feedback depends on one's level of self-esteem, $F(1,163)=12.25$, $p<.001$, and $F(1,164)=14.45$, $p<.001$, respectively (see Table 9). Across both group situations, success feedback created more reactivity in the ratings of the ingroups and outgroups by high and low self-esteem individuals, (HSE=24.97, LSE=18.46 own-other; HSE=19.92, LSE=10.74, above-below); whereas failure feedback produced no significant difference in ratings (HSE=16.34, LSE=16.47 own-other; HSE=15.76, LSE=16.52 above-below). In both group situations, self-esteem was relatively unaffected by negative self-relevant information in that a threat to one's self did not give rise to self-enhancing strategies by either high or low self-esteem. When given positive self-relevant information, high self-esteem individuals were more positive in the ratings of the groups but not so with low self-esteem individuals. In the minimal group situation, $F(1,163)=8.69$, $p<.01$, high self-esteem participants were also more reactive in their responses to evaluative feedback as indicated by the greater discrepancy in their evaluations, (F=14.76, S=24.97, evaluative spread=10.91) than low self-esteem participants (F=16.52, S=18.46, evaluative spread=1.94). This was not found within the conceptual group situation, ($F<1$). This may be because the size of the

conceptual group of above- below-average scorers is much larger than that of the minimal group. This reasoning is consistent with the findings of Gerard & Hoyt (1974). They found that ingroup favoritism decreases as size of the group increases.

This same intense reaction by high self-esteem individuals as a result of evaluative feedback exists not only in the rating of the ingroup but also in the rating of the outgroup, as demonstrated by the significant main effects for own, $F(1,163)=10.27$, $p<.002$, other, $F(1,163)=9.72$, $p<.003$, above, $F(1,164)=4.54$, $p<.04$, and below $F(1,164)=11.78$, $p<.001$.

Stability had no independent effect on the discrepancy of the rating of the ingroup or the outgroup. However, as with self-esteem, a similar pattern of reactivity emerged in the minimal group situation. As can be seen in Table 10, the significant interaction between stability of self-esteem and feedback in the minimal group situation indicated that unstable self-esteem participants were more reactive to evaluative feedback in their ratings of both target groups than stable self-esteem participants, $F(1,163)=7.23$, $p<.01$. That is, evaluative feedback produced a significantly greater discrepancy in the ratings by unstable self-esteem participants ($F=13.71$, $S=22.54$, evaluative spread 8.83) than stable self-esteem participants ($F=17.39$, $S=21.23$, evaluative spread 3.84).

Although stability and self-esteem separately interacted with feedback to produce discrepancies in levels of reactivity, the combined interactive effect between stability, self-esteem and feedback did not reach statistical significance. However, planned comparisons of the evaluative spreads for the stability x esteem x feedback interaction were performed on the ratings of own/other and above-/below-average scorers to establish whether, as predicted by Kernis, unstable high self-esteem individuals are more reactive to evaluative

feedback than stable high self-esteem or low self-esteem. One way to look at this would be to compare the discrepancy in ratings of groups by unstable high self-esteem participants to all others. Because evaluative feedback about one's own group's performance should produce similar reactions to that of feedback regarding personal performance, the interaction for the evaluation of the ingroup was used for the comparisons. In the minimal group situation, the evaluative spread for unstable high self-esteem individuals (18.1) was significantly greater than the evaluative spread for stable high self-esteem individuals (9.94), $F(1,163)=6.15$, $p<.05$, (see Table 11). Since the evaluative spread for high self-esteem participants was the closest score to unstable self-esteem participants, it follows that the remaining spreads were also significantly lower (stable low self-esteem=-.91, unstable low self-esteem=-7.62) (Kleinbaum & Kupper, 1978). The same held true within the conceptual group situation, with unstable high self-esteem being indicative of larger discrepancies in reactivity (22.23) than stable high self-esteem (12.98), $F(1,164)=5.896$, $p<.05$, or all others (stable LSE=10.26, unstable LSE=10.32). This reactivity data lends support to Kernis' contention that unstable high self-esteem individuals are the most reactive to evaluative feedback. It goes beyond Kernis' previous findings in that the reactivity of unstable high self-esteem individuals is affected not only by personal evaluative feedback, but is also affected by evaluative feedback about one's group performance.

Self Ratings

The univariate tests of participants' self ratings revealed only a main effect for self-esteem, $F(1,164)=14.32$, $P<.0002$, such that high self-esteem participants rated themselves more positively (M=29.48) than did low self-esteem participants (M=24.74).

Unlike previous studies, in this study both the positive and negative self-relevant information did not have an effect on one's self ratings ($F<1$, ns). There was a marginally significant interaction between self-esteem and task importance, $F(1,164)=2.97$, $P<.09$. Planned comparison of the means revealed that high self-esteem participants evaluated themselves more positively than low self-esteem participants when told the task was not relevant to their overall intelligence (HSE $M=30.35$, LSE $M=23.83$), $F(1,164)=13.42$, $P<.0001$.

CHAPTER 4

GENERAL DISCUSSION

The results of this study provide evidence that both self-consistency and self-enhancement theories are important in understanding the engagement of self-serving strategies. While prior research has provided stronger support for low self esteem individuals being unable or incapable of engaging in self-enhancing strategies, these present findings suggest that both high and low self-esteem individuals are capable but it depends on a combination of factors including the self-relevance of the feedback, the stability of one's self-view and the type of measure used to indicate the employment of self-serving strategies.

First, the engagement of self-serving strategies depends on the relevance of the evaluative feedback to one's self concept. Highly self-relevant, negative feedback (although threatening) is consistent with one's low self view and constrains low self-esteem individuals from engaging in self-enhancement processes. They are faced with the situation of dealing with consistent but highly threatening information. Thus, although motivated to maintain a positive self view, they are constrained by the fact that this information cannot be distorted as it is consistent and very important to one's self view. Highly self-relevant, negative information for high self-esteem individuals may be as equally threatening. However, they are not constrained by the reality of the information as it is inconsistent with a positive self view. Thus, high self-esteem individuals, also being

motivated to maintain a positive self view, are not constrained from distorting the inconsistent information. On the surface, this scenario would lend support for the contention that low self-esteem individuals are incapable of engaging in self-enhancement processes. However, if the constraints of reality are altered by manipulating the relevance of the task feedback to one's self concept, then low self-esteem individuals are capable of engaging in self-enhancement strategies as demonstrated by the present results. Previous research investigating the relationship of self-serving strategies and self-esteem typically employed a highly self-relevant task. If prior research had employed feedback that was not highly self-relevant, then the prior results could have concluded that only low self-esteem individuals were capable of engaging in these strategies.

A second factor in understanding the employment of self-serving strategies by high and low self-esteem individuals is the stability of one's self view, as suggested by Kernis (1993). Stable high self-esteem individuals do not engage in self-serving strategies in either the important or unimportant condition because their secure positive view is not affected by this type of feedback. For unstable high self-esteem individuals, evaluative feedback seems to have more of an effect than for stable high self-esteem individuals but only when the feedback implicates one's intellectual and creative ability. It is also the case, on some of these measures, that unstable low self-esteem individuals may also be more threatened with negative self-relevant information than stable low self-esteem. This is interesting because these data suggest that the ability to engage in self-enhancing biases depends upon the stability of one's self view as well as the self-relevance of the evaluative feedback.

The intergroup bias results (an indirect measure of self-enhancement) are

inconsistent with previous research findings that individuals with high self-esteem display greater intergroup bias than low self-esteem. In this study, low self-esteem individuals maximized the difference in the rating of groups under success conditions and minimized the difference under failure conditions in both the minimal and meaningful group situation. When one's low self view has been bolstered, the direction of the bias comes from enhancing one's own group when experiencing success. There was no difference in the rating of the outgroup due to feedback. Overall, stability was not found to have an interactive effect with self-esteem and feedback in producing intergroup bias. The reason for the weak results could be due to the lack of comparison information about the outgroup's performance. Although stability was not found to have interactive effects with self-esteem and feedback in producing intergroup bias, stability was shown to moderate responses to feedback for high self-esteem individuals. Unstable high self-esteem individuals were the most reactive to evaluative feedback as indicated by the greater evaluative spread of the ingroup in both the minimal and conceptual group situation. This finding lends support for the conclusion that stability is associated with enhanced sensitivity to evaluative events, even in the intergroup situation.

CHAPTER 5

IMPLICATIONS

In a review of the literature on individual expectancies about competence and reactions to evaluative feedback, Shrauger (1975) raised the issue that it was unclear whether low self-esteem individuals were affected more by negative information because it was consistent with their self view therefore easily accepted, or whether negative information was more stressful and they have less "adequate techniques for dealing with all types of stressful situations" (pg 592). The mechanism, according to Shrauger, accounting for this discrepancy had not been explained. Evidence for a mechanism which would account for the apparent discrepancy in behavior by low self-esteem individuals was also not answered by this present study. One could speculate, however, that since threats to the self view increases anxiety, those individuals already experiencing a high level of arousal from a low self view would find threatening information highly anxiety provoking. An even greater increase in anxiety should be produced when the task is important than when the task is unimportant. Increases in anxiety and frustration have been demonstrated to reduce overall cognitive capacity and interfere with performance (see Seta Seta & Donaldson, 1991 for review). Therefore, under conditions of negative self-relevant information, it is possible that when the task is important, low self-esteem individuals are incapable of self-enhancing strategies due to cognitive capacity constraints. When the task is unimportant, low self-esteem individuals should be capable as there is less anxiety producing constraints on cognitive capacity, and they are motivated

by the threatening self-relevant information.

In a review of the issues regarding self-serving strategies due to self-esteem and evaluative feedback, Blaine & Crocker (1993) suggest that we need not "assume a motive" for self-serving strategies. From an information processing model, consistent information is better believed by individuals than inconsistent information. This view suggests a distinction or independence between cognitive and affective or motivational reactions. This present study does not attempt to pit a motivational interpretation against a cognitive interpretation. Rather, it offers an explanation of when both cognitive and motivational processes can be involved in the engagement of self-serving strategies (eg. Brown et al., 1988). More importantly, the present results imply that the unity assumption (held by both self-consistency and self-enhancement theorists) that "a superordinate cognitive system oversees all mental activity and resolves inconsistencies between thoughts, feelings, and actions" (pg 886) should not be dropped as suggested by Swann et al. (1987).

In conclusion, these findings help contribute to our understanding of the factors that affect the self-esteem hypothesis in intergroup behavior. Furthermore, they suggest that the ability to engage in self-serving strategies depends upon the stability of one's self view as well as the self-relevance of the evaluative feedback.

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APPENDIX A

TABLES

Table 1

Descriptive Statistics of Overall Sample

Stability of Self Esteem

	Spring 1990 N=360	Fall 1990 N=313	Spring 1991 N=240
Mean	3.49	3.47	3.41
SD	1.28	1.40	1.35
Median	4	4	4
Mode	3	5	4
Skewness	-.868	-.847	-.760

Level of Self Esteem

	Spring 1990	Fall 1990	Spring 1991
Mean	31.69	31.31	31.53
SD	5.10	5.03	4.94
Median	31	31	32
Mode	31	30	32
Skewness	-.350	-.681	-.348

Table 2

Evaluations of the Ratings of Importance to have Personally Performed Well on the Task as a Function of Task Feedback, Self-Esteem, and Task Importance.

		Task Importance	
		Important	Unimportant
High Self-Esteem			
	Failure	4.93	5.11
	Success	5.76	4.35
Low Self-Esteem			
	Failure	5.04	4.09
	Success	5.20	5.68

Note. The scale ranged from *not at all important* (1) to *very important* (7).

Table 3

Evaluations of the Ratings of Importance for Group to have Performed Well on the Task as a Function of Task Feedback, Self-Esteem, Stability of Self-Esteem, and Task Importance.

	Task Importance	
	Important	Unimportant
Stable LSE		
Failure	4.75	3.00
Success	5.63	4.00
Unstable LSE		
Failure	4.13	2.92
Success	4.00	4.92
Unstable HSE		
Failure	3.36	4.50
Success	5.17	4.29
Stable HSE		
Failure	4.25	3.88
Success	4.20	4.69

Note. HSE=high self-esteem; LSE=low self-esteem. The scale ranged from *not at all important* (1) to *very important* (7).

Table 4

Evaluations of the Ratings of Accuracy of Task Assessment as a Function of Task Feedback, Self-Esteem, Stability of Self-Esteem, and Task Importance.

		Task Accuracy	
		Important	Unimportant
Stable LSE			
	Failure	1.75	1.60
	Success	3.63	3.29
Unstable LSE			
	Failure	2.13	1.58
	Success	2.67	3.33
Unstable HSE			
	Failure	1.91	2.17
	Success	3.17	1.86
Stable HSE			
	Failure	2.69	1.88
	Success	3.20	2.92

Note. HSE=high self-esteem; LSE=low self-esteem. The scale ranged from *not at all accurate* (1) to *very accurate* (7).

Table 5

Evaluations of Groups as a Function of Task Feedback.

	Own	Other
Failure	14.32	16.78
Success	23.34	20.34

Note. The higher the number, the more positive the evaluation.

Table 6

Evaluations of Groups as a Function of Self-Esteem.

	Own	Other
High Self-Esteem	18.34	19.90
Low Self-Esteem	18.25	16.57

Note. The higher the number, the more positive the evaluation.

Table 7

Evaluations of Groups as a Function of Task Feedback.

	Above	Below
Failure	20.65	12.14
Success	26.23	4.66

Note. The higher the number, the more positive the evaluation.

Table 8

Evaluations of Groups as a Function of Task Feedback and Self Esteem.

		Above	Below
High Self-Esteem			
	Failure	21.16	11.51
	Success	29.10	10.73
Low Self-Esteem			
	Failure	20.02	12.91
	Success	23.21	-1.72

Note. The higher the number, the more positive the evaluation.

Table 9

Mean Evaluations of Minimal and Conceptual Ingroups and Outgroups as a Function of Task Feedback and Self Esteem.

		High Self-Esteem	Low Self-Esteem
Minimal Group			
	Failure	15.76	16.52
	Success	24.97	18.46
Conceptual Group			
	Failure	16.34	16.47
	Success	19.92	10.74

Note. The higher the number, the more positive the evaluation.

Table 10

Mean Evaluations of Minimal Group as a Function of Stability of Self Esteem and Task Feedback.

	Stable	Unstable
Failure	17.39	13.71
Success	21.23	22.54

Note. The higher the number, the more positive the evaluation.

Table 11

Evaluations of the Ingroup for the Minimal and Conceptual Group Situations as a Function of Task Feedback, Stability of Self Esteem, and Level of Self Esteem.

	High Self-Esteem		Low Self-Esteem	
	Stable	Unstable	Stable	Unstable
Minimal Group				
Failure	15.13	9.44	18.61	14.67
Success	25.07	27.54	17.79	22.29
Conceptual Group				
Failure	13.03	9.39	12.94	12.89
Success	27.93	31.62	23.20	23.21

Note. The higher the number, the more positive the evaluation.

APPENDIX B

MATERIALS

Social Security No.____

Please read each statement below and circle the response that best describes how you feel. There are no right or wrong answers. Be sure to respond to each statement.

Does your opinion of yourself tend to change a good deal, or does it always continue to remain the same?

1 _____ Changes a great deal
2 _____ Changes somewhat
3 _____ Changes very little
4 _____ Does not change at all

Do you ever find that on one day you have one opinion of yourself and on another day you have a different opinion?

1 _____ Yes, this happens often
2 _____ Yes, this happens sometimes
3 _____ Yes, this rarely happens
4 _____ No, this never happens

I have noticed that my ideas about myself seem to change very quickly.

1 _____Agree
2 _____Disagree

Some days I have a very good opinion of myself; other days I have a very poor opinion of myself.

1 _____Agree
2 _____Disagree

I feel that nothing, or almost nothing, can change the opinion I currently hold of myself.

1 _____Agree
2 _____Disagree

Please read each statement below and circle the response that best describes how you feel. You are to strongly agree (SA), agree (A), disagree (D), or strongly disagree (SD). Be sure to respond to each statement.

1. On the whole, I am satisfied with myself.	SA	A	D	SD
2. At times I think I am no good at all.	SA	A	D	SD
3. I feel that I have a number of good qualities.	SA	A	D	SD
4. I am able to do things as well as most other people.	SA	A	D	SD
5. I feel I do not have much to be proud of.	SA	A	D	SD
6. I certainly feel useless at times.	SA	A	D	SD
7. I feel that I'm a person of worth, at least on an equal plane with others.	SA	A	D	SD
8. I wish I could have more respect for myself.	SA	A	D	SD
9. All in all, I am inclined to feel that I am a failure.	SA	A	D	SD
10. I take a positive attitude toward myself.	SA	A	D	SD

Using the scale below, rate the extent to which each of the following words reflect <u>your</u> feelings at this moment <u>now</u>.

1.....2.....3.....4.....5.....6.....7
not at all characteristic of how I feel — very characteristic of how I feel

kind	tolerant
cooperative	mad
afraid	frightened
cold	hesitant
angry	disagreeable
efficient	conforming
fearful	nervous
careful	proud
calm	flexible
appreciative	silly
amiable	resourceful
honest	alert

Using the scale below, rate the extent to which each of the following words reflect your feelings at this moment now.

1.....2.....3.....4.....5.....6.....7
not at all characteristic of how I feel — very characteristic of how I feel

afraid	frightened
active	energetic
angry	disagreeable
respectable	generous
fearful	nervous
quiet	modest
calm	cooperative
undecided	grateful
amiable	superstitious
forgetful	impulsive
mad	sociable
warm	shy

This experiment involves being a member of a group. There are two groups -----Group A and Group B. You are a member of Group . Group membership was determined by chance from your selection of a letter as you entered the experiment. Some of the people in this room as well as people in other sessions are also members of your group. There are approximately eight members in each group.

You and your group have been given a symbol task. This task has no implications for personal abilities. It is <u>not</u> related to abstract reasoning ability or overall intelligence. It is an activity often given as a filler when there is extra time in experiments. We are giving the task today to see what people think of it.

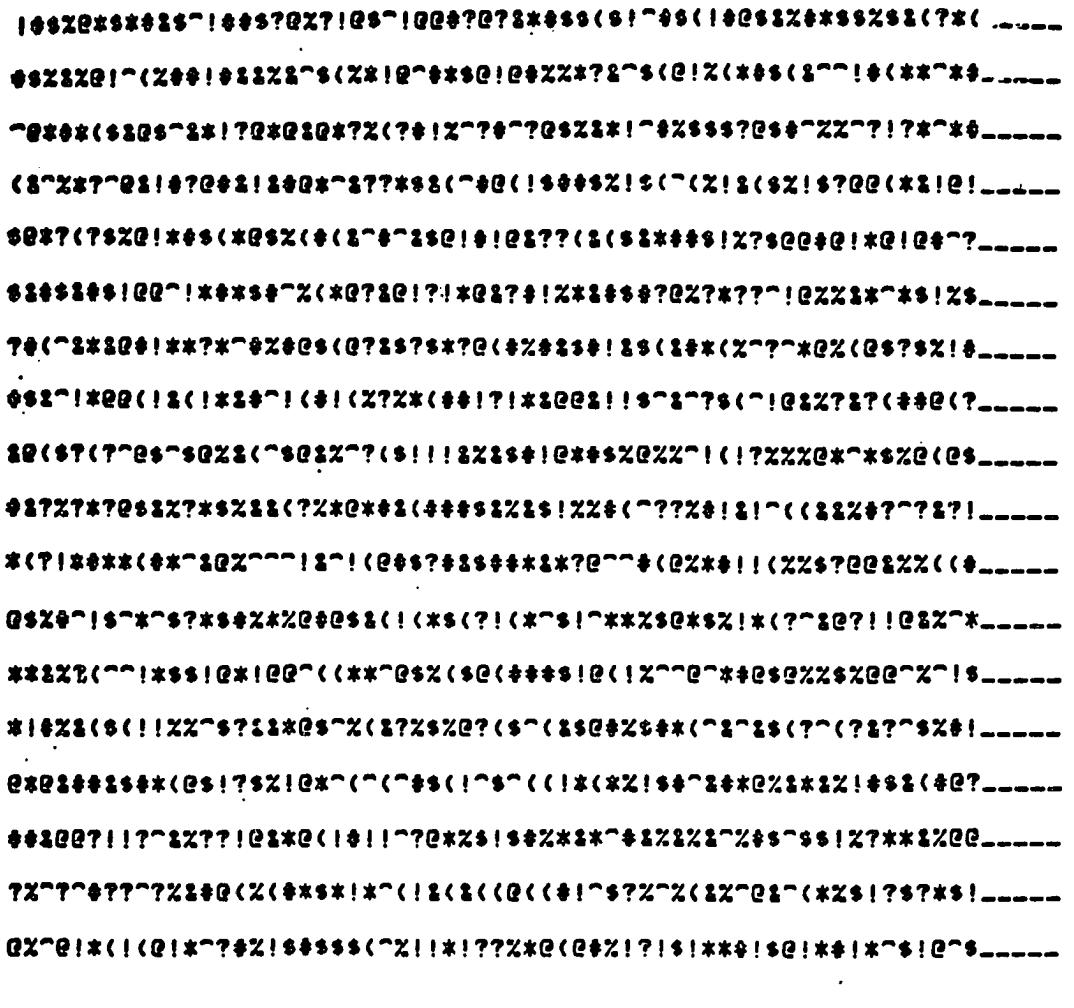
INSTRUCTIONS

At the top of the sheet of paper there are 4 target symbols. Then listed below those 4 symbols are several rows of randomly arranged symbols which includes the 4 target symbols and 10 other different symbols. You are to count the total number of times the 4 target symbols appear in a row. You are to write on the blank line at the end of the row the total number of symbols you counted in that row. They can appear in an order.

You will then go to the next row, count the number of times the 4 target symbols appear totally in that row, and write the number down at the end on the blank line. Make sure there is only one total number down for all of the 4 target symbols. You will continue this until I tell you to stop.

Please work as quickly yet as accurately as you can. A score on this task will consist of how accurately you count the number of target symbols in each line and how many lines you complete.

TARGET SYMBOLS ARE !,@,^, AND (



This experiment involves being a member of a group. There are two groups -----Group A and Group B. You are a member of Group A . Group membership was determined by chance from your selection of a letter as you entered the experiment. Some of the people in this room as well as people in other sessions are also members of your group. There are approximately eight members in each group.

You and your group have been given the Berkley Abstract Reasoning Task, otherwise known as the BART. This task was developed to assess abstract reasoning ability and overall intelligence. The BART has been found to be a reliable indicator of people's ability to process abstract symbols and integrate information to make perceptual judgements. The BART also assesses overall intellectual ability.

INSTRUCTIONS

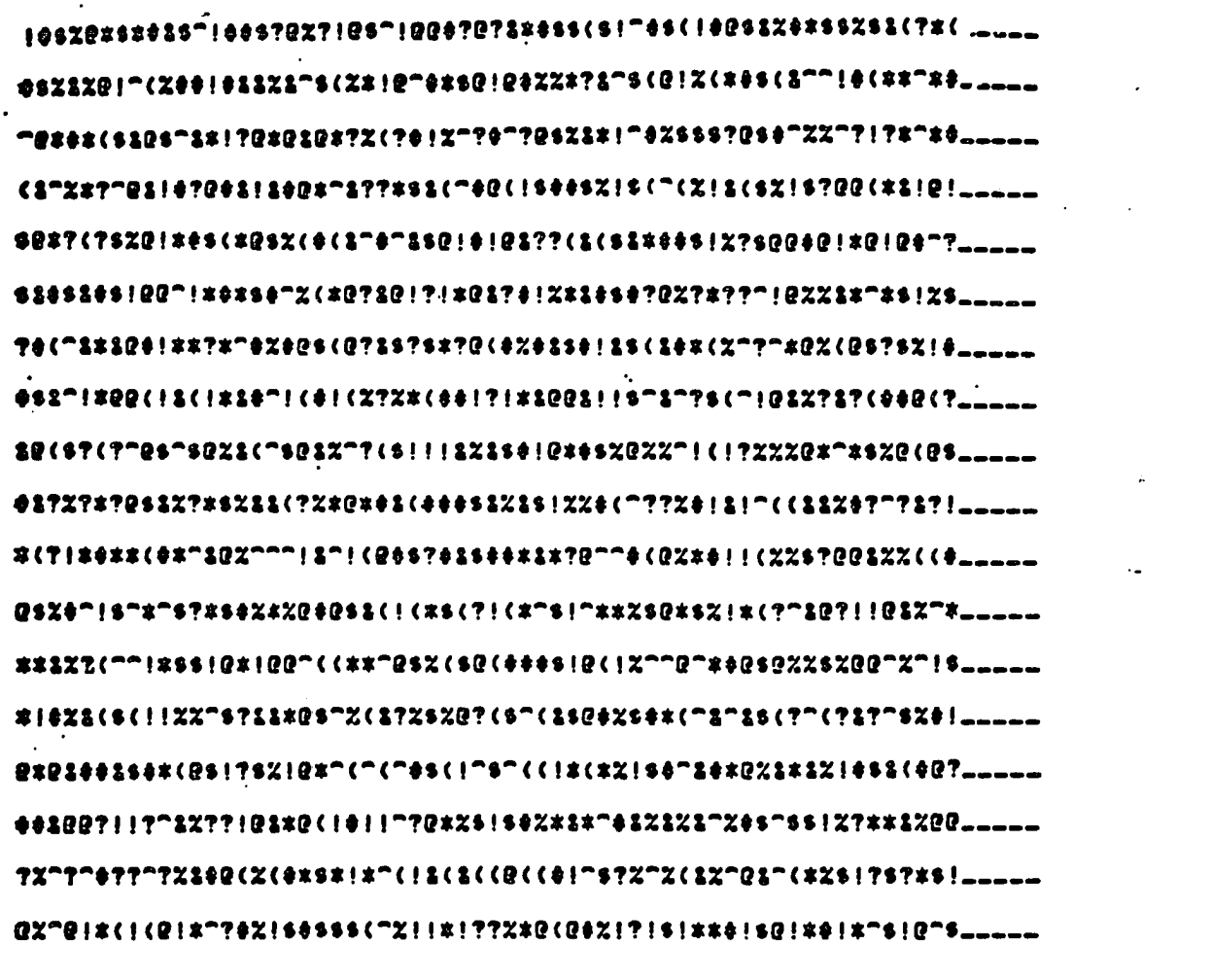
At the top of the sheet of paper there are 4 target symbols. Then listed below those 4 symbols are several rows of randomly arranged symbols which includes the 4 target symbols and 10 other different symbols. You are to count the total number of times the 4 target symbols appear in a row. You are to write on the blank line at the end of the row the total number of symbols you counted in that row. They can appear in an order.

You will then go to the next row, count the number of times the 4 target symbols appear totally in that row, and write the number down at the end on the blank line. Make sure there is only one total number down for all of the 4 target symbols. You will continue this until I tell you to stop.

Please work as quickly yet as accurately as you can. A score on this task will consist of how accurately you count the number of target symbols in each line and how many lines you complete.

Berkley Abstract Reasoning Task

TARGET SYMBOLS ARE !,@,^, AND (



You have been given the result of how you and your group performed on the task. The next sheet contains the results for your group and instructions on how to interpret those results. Although your score is accurate, the interpretation may be unreliable as this task has not been found to be indicative of abstract reasoning and overall intelligence.

Following the task result sheet are some additional measures that would be helpful in interpreting our research results. Before we go on to the next part of the experiment, I would like you to read the instructions at the top of the page following the task results and write a response for <u>each</u> trait on that page. When you have completed that page go on to the next. Do not flip forward or backwards. Please write a response for <u>each</u> trait. There are no right or wrong answers to these questions. We are interested in your impressions.

Please do not spend a lot of time on this ---- work quickly.

You have been given the result of how you and your group performed on the BART. The next sheet contains the results for your group and instructions on how to interpret those results. Please read over the results sheet carefully in order that you may have a full understanding of performance on this task.

Following the task result sheet are some additional measures that would be helpful in interpreting our research results. Before we go on to the next part of the experiment, I would like you to read the instructions at the top of the page following the task results and write a response for <u>each</u> trait on that page. When you have completed that page go on to the next. Do not flip forward or backwards. Please write a response for <u>each</u> trait. There are no right or wrong answers to these questions. We are interested in your impressions.

Please do not spend a lot of time on this ---- work quickly.

TASK RESULTS:

Subject number:_____ Group:_____

Your group's average score, including your own, was in the _____ percentile. This means that _____% of the people who have taken this task did better than your group.

HOW TO INTERPRET THE RESULTS:

The above score is based on the total number of symbols correctly identified in the amount of time allowed.

The average score on the task is in the 57th percentile.

A UNC-G students' average score is in the 63rd percentile.

PERCENTILES	
0-30	Below average. On the average this group is lacking in the ability to identify quickly and accurately abstract symbols. This inadequate abstract reasoning ability may be indicative of cognitive and intellectual deficits among the group members.
40-70	Average. On the average, this group has reasonable ability in identifying quickly and accurately abstract symbols. This indicates adequate intellectual and abstract reasoning ability.
80-100	Above average. On the average, this group is intelligent and conceptual. Ihis indicates superior ability in abstract reasoning and intellectual situations.

Choose a number from the following scale to indicate how characteristic you think the following traits are of you.
Choose a number for each trait.

1.....2.....3.....4.....5.....6.....7
Extremely Uncharacteristic — Extremely Characteristic

Motivated:

Ambitious:

Boring:

Creative:

Rude:

Stupid:

Self-Centered:

Friendly:

Sincere:

Insensitive:

Trustworthy:

Apathetic:

Uninformed:

Considerate:

Intelligent:

Incompetent:

Choose a number from the following scale to indicate how characteristic you think the following traits are of members of Group B. If you are not sure, give your best guess to indicate what you think the most typical member of Group B would be like. If you are a member of Group B, only rate the other members, excluding yourself. Choose a number for <u>each</u> trait.

1.....2.....3.....4.....5.....6.....7
Extremely Uncharacteristic — Extremely Characteristic

Motivated:

Ambitious:

Boring:

Creative:

Rude:

Stupid:

Self-Centered:

Friendly:

Sincere:

Insensitive:

Trustworthy:

Apathetic:

Uninformed:

Considerate:

Intelligent:

Incompetent:

Choose a number from the following scale to indicate how characteristic you think the following traits are of members of Group A. If you are not sure, give your best guess to indicate what you think the most typical member of Group A would be like. If you are a member of Group A, only rate the other members, excluding yourself. Choose a number for each trait.

1.....2.....3.....4.....5.....6.....7
Extremely Uncharacteristic — Extremely Characteristic

Motivated:

Ambitious:

Boring:

Creative:

Rude:

Stupid:

Self-Centered:

Friendly:

Sincere:

Insensitive:

Trustworthy:

Apathetic:

Uninformed:

Considerate:

Intelligent:

Incompetent:

Choose a number from the following scale to indicate how characteristic you think the following traits are of people who score above average on this task. If you are not sure, give your best guess or indicate what you think the most typical person who scores above average on this task would be like. Choose a number for each trait.

1.....2.....3.....4.....5.....6.....7
Extremely Uncharacteristic — Extremely Characteristic

Motivated:

Ambitious:

Boring:

Creative:

Rude:

Stupid:

Self-Centered:

Friendly:

Sincere:

Insensitive:

Trustworthy:

Apathetic:

Uninformed:

Considerate:

Intelligent:

Incompetent:

Choose a number from the following scale to indicate how characteristic you think the following traits are of people who score below average on this task. If you are not sure, give your best guess or indicate what you think the most typical person who scores below average on this task would be like. Choose a number for each trait.

1.....2.....3.....4.....5.....6.....7
Extremely Uncharacteristic — Extremely Characteristic

Motivated:

Ambitious:

Boring:

Creative:

Rude:

Stupid:

Self-Centered:

Friendly:

Sincere:

Insensitive:

Trustworthy:

Apathetic:

Uninformed:

Considerate:

Intelligent:

Incompetent:

We would like to assess your reaction to the score you and your group obtained on the task. Your groups' performance (including yours) fell within the _____ percentile. This means that _____% of the people who have previously done this task have performed better. This task may _____ _____ among group members.

Using the scale below, rate the extent to which each of the following words reflect <u>your</u> feelings at this moment <u>now</u>.

1.....2.....3.....4.....5.....6.....7
not at all characteristic of how I feel — very characteristic of how I feel

afraid	frightened
active	energetic
angry	disagreeable
respectable	generous
fearful	nervous
quiet	modest
calm	cooperative
undecided	grateful
amiable	superstitious
forgetful	impulsive
mad	sociable
warm	shy

Please read each question and answer as accurately as possible.

1. On a scale of 1 to 7 how satisfied are you with your groups' performance. (1 means not at all and 7 means very much). _____

2. Was your group's score lower than that of the average UNC-G score? _____ (true/false)

3. What percentile do you think your own personal score on this task fell within? _____ (0 to 100)

4. On a scale of 1 to 7, how important to you was it for your group to do well on the task? (1 means not at all important and 7 means very important). _____

5. On a scale of 1 to 7, how important was it for you to personally do well on the task? (1 means not at all important and 7 means very important) _____

6. On a scale of 1 to 7, how accurate do you think this task is at assessing overall intelligence? (1 means not at all accurate and 7 means very accurate) _____